

PATENT ABSTRACTS OF JAPAN

(11) Publication number : 09-120072

(43) Date of publication of application : 06.05.1997

(51)Int.Cl. G02F 1/1339

(21)Application number : 07-229504 (71)Applicant : TOSHIBA ELECTRON ENG CORP
TOSHIBA CORP

(22) Date of filing : 06.09.1995 (72) Inventor : KURAUCHI SHOICHI

(72)Inventor : KURAUCHI SHOICHI
MIYAZAKI DAISUKE
HADO HITOSHI
AKIYOSHI MUNEHARU
MIDORIKAWA TERUYUKI

(30)Priority

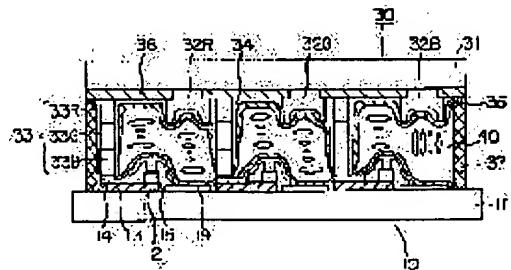
Priority number : 07212192 Priority date : 21.08.1995 Priority country : JP

(54) LIQUID CRYSTAL DISPLAY ELEMENT

(57) Abstract:

PROBLEM TO BE SOLVED: To provide an inexpensive element of a color display type with which the display performance and yield are improved without using plastic beads and the number of stages is decreased.

SOLUTION: Columnar spacers 33 disposed on a counter substrate 30 are pressed onto the wiring layer of an active matrix substrate 10 and more particularly the wiring layer of the lowermost layer 13 to maintain the insulation. In such a case, by constituting the spacers 33 of the laminates of colored layers and in addition, forming resist into shape having overhangs by photolithography, the formation of conductive layers on flanks is averted and, therefore, the free selection of the contact positions is made possible, and further by



forming the spacers out of the laminates of the colored layers of the diameters larger toward the upper layers, the processing stages are decreased. The wiring layers to be pressed are formable as auxiliary capacitance lines as well. The spacers can also be functioned as the conductive color layers and electrode transfer members as well.

LEGAL STATUS

[Date of request for examination] 05.09.2002

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

Copyright (C); 1998,2003 Japan Patent Office